Montana Board of Oil and Gas Conservation
Environmental Assessment

Operator: Central Montana Resources, LLC
Well Name/Number: Snowmane No. 2
Location: SW NW Section 9 T13N R29E
County: Petroleum **, MT; Field (or Wildcat)** W/C

Air Quality

(possible concerns)
Long drilling time: No, 10 to 15 days drilling time.
Unusually deep drilling (high horsepower rig): No, a triple derrick drilling rig to drill a directional hole to 4609'MD/4600'TVD.Heath Formation.
Possible H2S gas production: Slight chance H2S.
In/near Class I air quality area: No class I air quality area.
Air quality permit for flaring/venting (if productive) Yes, DEQ air quality permit required under 75-2-211.

Mitigation:
X Air quality permit (AQB review)
__ Gas plants/pipelines available for sour gas
__ Special equipment/procedures requirements
__ Other:_____

Comments: No special concerns – using triple derrick drilling rig to drill a directional hole to 4609'MD/4600'TVD.Heath Formation.

Water Quality

(possible concerns)
Salt/oil based mud: No, surface hole will be drilled with freshwater. Mainhole will be drilled with freshwater and freshwater drilling mud.
High water table: No high water table in the area of review.
Surface drainage leads to live water: No, closest drainage is an unnamed ephemeral tributary drainages to Anderson Creek, about 1/8 of a mile to the southwest and 1/16 of a mile to the northeast from this location.
Water well contamination: No, no water wells within 1 mile and further in any direction from this location. This well will set 9 5/8" surface casing to 500' and cement to surface. Well will be drill with 1% KCL mud.
Porous/permeable soils: No, silty sandy bentonitic soils.
Class I stream drainage: No

Mitigation:
X Lined reserve pit
X Adequate surface casing
__ Berms/dykes, re-routed drainage
__ Closed mud system
__ Off-site disposal of solids/liquids (in approved facility)
__ Other: _____

Comments: 500' of surface casing cemented to surface adequate to protect freshwater zones. Also, fresh water mud system to be used on surface hole.

Freshwater mud system to be used from surface to TD. Freshwater drilled cuttings and mud solids will buried in the lined pit. Lined pit will backfilled when dry. No concerns.

Soils/Vegetation/Land Use

(possible concerns)
Steam crossings: No stream crossings require.
High erosion potential: No, small cut, up to 4.9' and small fill, up to 5.5', required.
Loss of soil productivity: No, location will be restored after drilling, if nonproductive. If productive unused portion of drillsite will be reclaimed.
Unusually large wellsite: No, 300'X400' location size required.
Damage to improvements: Slight, surface use is sage brush lands just off the edge of cultivated land. The actual wellsite is on sage brush
Conflict with existing land use/values: Slight

Mitigation
__ Avoid improvements (topographic tolerance)
__ Exception location requested
X Stockpile topsoil
__ Stream Crossing Permit (other agency review)
X Reclaim unused part of wellsite if productive
__ Special construction methods to enhance reclamation
X Other Requires DEQ General Permit for Storm Water Discharge Associated with Construction Activity, under ARM 17.30.1102(28).

Comments: Access will be from existing county road and ranch trail. Short road to be built from trail access into location, Freshwater drill cuttings and mud solids will buried in the lined pit. Lined pit will backfilled when dry. No concerns.

Health Hazards/Noise

(possible concerns)
Proximity to public facilities/residences: Residence, none within 1 mile in any direction from this location.
Possibility of H2S: Slight chance H2S.
Size of rig/length of drilling time: Small drilling rig/short 10 to 15 days drilling time.

Mitigation:
X Proper BOP equipment
__ Topographic sound barriers
__ H2S contingency and/or evacuation plan
__ Special equipment/procedures requirements
__ Other:_____

Comments: Operational BOP and adequate surface casing should mitigate any problems. No concerns.

Wildlife/recreation

(possible concerns)
Proximity to sensitive wildlife areas (DFWP identified): None identified.
Proximity to recreation sites: None identified.
Creation of new access to wildlife habitat: No
Conflict with game range/refuge management: No
Threatened or endangered Species: Threatened or endangered species identified are the Pallid Sturgeon and Black-footed Ferret. Species of concern are the Greater Sage

Grouse and Sprague's Pipit. Proposed species is the Mountain Plover. NH tracker website lists species of concern as the Greater Sage Grouse and Black-footed Ferret.

Mitigation:

__ Avoidance (topographic tolerance/exception)
__ Other agency review (DFWP, federal agencies, DSL)
__ Screening/fencing of pits, drillsite
__ Other:_____

Comments: Private surface sage brush lands adjacent to cultivated surface lands. No concerns.

Historical/Cultural/Paleontological

(possible concerns)

Proximity to known sites None identified.

Mitigation

__ avoidance (topographic tolerance, location exception)
__ other agency review (SHPO, DSL, federal agencies)
__ Other:_____

Comments: Private sage brush surface lands adjacent to cultivated surface lands. No concerns.

Social/Economic

(possible concerns)

__ Substantial effect on tax base
__ Create demand for new governmental services
__ Population increase or relocation

Comments: Well is a wildcat, until production is established no social or economic impact can be assessed.

Remarks or Special Concerns for this site

Well is a wildcat directional hole to 4609'MD/4600'TVD.Heath Formation.

Summary: Evaluation of Impacts and Cumulative effects

No long term impacts expected. Some short term impacts will occur.

I conclude that the approval of the subject Notice of Intent to Drill (does/**does not**) constitute a major action of state government significantly affecting the quality of the human environment, and (does/**does not**) require the preparation of an environmental impact statement.

Prepared by (BOGC): /s/ Steven Sasaki
(title:) Chief Field Inspector
Date: February 14, 2011

Other Persons Contacted:

Montana Bureau of Mines and Geology GWIC website

(Name and Agency)
Petroleum County water wells

(subject discussed)
February 8, 2011

(date)

Montana Natural Heritage Program Website (FWP)
(Name and Agency)
Heritage State Rank= S1, S2, S3, T13N R29E
(subject discussed)

February 9, 2011
(date)

US Fish and Wildlife, Region 6 website
(Name and Agency)
ENDANGERED, THREATENED, PROPOSED AND CANDIDATE SPECIES
MONTANA COUNTIES, Petroleum County
(subject discussed)

February 8, 2011
(date)

If location was inspected before permit approval:
Inspection date: February 14, 2011
Inspector: Fraser
Others present during inspection: None